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DRYING FRUITS AND VEGETABLES
By
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The kitchen at Mt. Vernon, like other kitchens of Martha Washington's day, is festooned with dried products of the garden. Drying is in fact the very oldest, the simplest and the cheapest method of food preservation, and it may well be one to fall back upon when there is a shortage of jars for canning, or a lack of storage space, along with more garden truck than can be used while fresh.

Drying foods preserves them by removing so much water that bacteria, yeasts, or molds, which would cause spoilage, can not grow in the food materials. Foods can be dried in the sun, or by artificial heat, or by electric fan.

Equipment

Sun-drying in the open air, in climates with long sunny rainless seasons, is the simplest and cheapest way of all. Quantities not too large may be spread upon clean boards, canvas, heavy wrapping paper, or sheets of muslin held in place by strips of lath along the edges. For larger quantities, trays can be made with light wooden frames and lath bottoms, and, for stacking, with cross pieces at ends and middle of the bottom to hold the trays slightly apart. To keep out insects, the drying food may be covered with muslin or cheesecloth tacked over the trays after the fruit is in place.

For more variable and cooler climates, an outdoor drier may be made like a hotbed, with sloping glass top, a wooden bottom, and ventilation through screened openings around the sides.

For indoor drying, single trays may be hung from the ceiling over the

kitchen stove, or placed on shelves above or near the stove. Or the food may be spread in baking pans or pie tins and dried in the oven, with the oven door open and the fire very low. A closed drier, however, has the advantage of protecting the drying food from the odors of foods that are cooking, and such a drier may be made of a packing box with cleats along two opposite sides to hold the trays apart. (Directions for making different types of driers, and detailed instructions for treatment of various vegetables and fruits are given in Farmers' Bulletin 984-F "Home Drying of Fruits and Vegetables", obtainable from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 5 cents a copy).

Preparation of the Food

Successful drying depends, to begin with, on the quality of the fruit or vegetable used, and then upon proper preparation. Vegetables, after being otherwise prepared, are "blanched" or scalded, with hot water or steam. But this treatment will not do for apples, pears, apricots, or peaches, because the sugar they contain would be lost in boiling or steaming. Instead, the fruits may be held in salt water until ready for the drier, or may be treated with fumes of sulphur for a short time before the drying begins, to prevent discoloration and souring, and to keep off insects. For this treatment the trays, or stacks of trays, are placed in a large covered box out of doors, and elevated on bricks or blocks of wood, over a pan of burning sulphur.

Directions for Drying some Vegetables and Fruits

Except in the climates or the seasons which can be depended upon for continuous sunshine, sun-drying in the open air presents many difficulties. Cloudy days or rain retard the drying process, even though the product is sheltered from rain. The directions given below apply to methods of drying by artificial heat, which in the greater part of the country will be found more reliable than sun-drying. The temperatures given are the highest that should be used for drying the given product. With slower drying, however, there may be danger of fermentation

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before the products dry.

Sweet corn -- Use any good table corn. Gather it in the milk stage, but only in quantities that can be prepared at once. Husk the ears, and remove any worm injuries, but silking is unnecessary. Dip in hot water 8 to 12 minutes to set the milk. Young corn will require longer for this than old. Drain, cool, and cut the grains off the ear. Spread on trays 1/2 to 3/4 inch deep and dry at 130 to 140 degrees F. Stir during drying to separate grains and break up masses. When sufficiently dried the grains will be hard and will break with a clean glass-like fracture.

Beans and peas -- Garden peas, wax beans, lima beans, mature snap beans. Gather when seeds are mature but before the pods are yellow and dry. Shell and dip 2 minutes in boiling salted water -- 2 tablespoons of salt to a gallon of water. Drain and spread on trays 1/2 to 3/4 inch thick. Dry at 115 to 120 degrees F. to begin with, allowing it to rise to 140. Stir frequently at the beginning. The process is complete when the beans and peas are dry and brittle.

Okra -- Use young tender pods, cut in 1/2 inch lengths. Place in layers on tray. Temperature at first 125 degrees F., increasing to 140. When process is complete the okra is dry and brittle.

Apples -- Select late maturing fruit of good cooking quality, mature but not soft. Pare, trim and slice evenly 1/4 inch thick. Sulphur 20 to 30 minutes, or hold in salt water until placed in drier. Start drying at 130 degrees F., increase to 175. Process complete when handful of slices has elastic stringy feel and separates when pressure is removed.

Pears -- Bartlett or any fine-grained pear with good flavor and high sugar. Pick when firm but readily loosened, store until ripe but still firm. Pare and core, slice or quarter. Sulphur or hold in salt water until placed in drier. Use same temperature as for apples. Process complete when slices are elastic and rubber-like, and water can not be pressed from cut surfaces.

Peaches -- Any good table variety. Uniform color and high solids are desirable. Ripe but not soft. Handle carefully to prevent bruising. Wash, peel or not as desired, stone, place in layers on tray, pit side up. Sulphur 15 to 20 minutes if peeled, 1 to 2 hours if unpeeled; or hold in salt water if unpeeled. Same temperatures as for apples, same test for dryness.

Apricots -- Tree ripened. Never peel. Halve and pit. Sulphur $1\frac{1}{2}$ to 2 hours. Temperatures 130 degrees F. at first, increasing to 165 toward end. Test for dryness same as for apples.

Treatment after Drying

An after-curing or conditioning process is desirable when products have been dried at the higher temperatures. Pile the material while still warm upon a clean surface, on trays or in a shallow box, in a dry place protected against insects, and stir it at daily intervals for ten days or two weeks, to distribute the remaining moisture equally throughout the mass.

When a given lot of material has become evenly dry, it should be stored in containers that are air-tight or nearly so, and they should be kept in a dark or semi-dark place, to prevent discoloration. Tin cans with close-fitting tops, or glass jars with rubbers are the best containers.

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